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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,014	08/27/2003	Wei-Cheng Wang	CFP-015265 (15745-396)	5908
23595	7590	06/09/2006	EXAMINER	
NIKOLAI & MERSEREAU, P.A. 900 SECOND AVENUE SOUTH SUITE 820 MINNEAPOLIS, MN 55402			KAHELIN, MICHAEL WILLIAM	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/649,014	Applicant(s) WANG, WEI-CHENG	
	Examiner Michael Kahelin	Art Unit 3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 1-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because of numerous grammatical errors including: "a" missing between "of" and "muscular" on line 2, "the" missing between "of" and "stimulated" on line 3, "the" should read "a" on line 5, "a" should be inserted between "generate" and "low", and "sent" should be inserted between "signal" and "to". Correction is required. See MPEP § 608.01(b).
2. The disclosure is objected to because of numerous informalities, some of which include from page 1 only: "having" should read "has" on line 12, "plate" should read "plates" on line 12, "unit to provide field" should read "unit provides a field" on line 13, "a" should be inserted between "and" and "thermal" on line 14, "said the" should read "the said" on line 15, "that" should be omitted on line 15, "a" should be inserted between "at" and "lower" on line 17, "speedup" should read "speed up" on line 17, "pulses" should read "pulse" on line 21, "string" should read "strings" on line 22, "plates" should read "plate" on line 22, "pulses" should read "pulse" on line 23, "the" should be inserted before "target" on line 24, and "much" should read "more" on line 24.
3. The above list comprises the informalities from only page 1 and is not exhaustive. Applicant is requested to assist in properly proofreading the specification. Appropriate correction is required.

Claim Objections

4. Claims 1-14 are objected to because of the following informalities: "a" should be inserted between "generate" and "low" on line 8 of claim 1 and "sent" should be inserted between "signal" and "to" on line 9 of claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 5-7 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It appears that claims 5-7 are attempting to combine the mutually exclusive embodiments shown in Figs. 1-3 and 6-9. Because the "elastic cloth" fixing element is only described in relation to the embodiments of Figs. 6-9, and claim 1 clearly recites that the device is "an insole" (i.e. the embodiment of claims 1-3), a skilled artisan would not be enabled to make and use the disclosed invention as both an insole and having "an elastic cloth adapted to be worn on a portion of the human body".

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. In regards to claim 1, the limitation "low frequency signal to the electrical plates...provide stimulus...and provide thermal effect" is vague because it is unclear how the electrical plates, instead of the thermal device, provide a thermal effect. It is vague whether the same element (i.e. the electrical plates) provide both the "stimulus" and the "thermal effect" or if separate elements provide the two therapies. The Examiner has interpreted the claim to recite two different elements, as shown in Fig. 2 and should be amended accordingly.

10. In regards to claims 2, 8, and 9, "the resistance" is lacking antecedent basis. Examiner is interpreting this to read "the thermal device" and should be amended accordingly.

11. In regards to claims 3 and 4, "corresponding to" is unclear because this does not describe or limit the relationship between the plates and the magnets. Examiner has interpreted this to mean that the device comprises magnetic units. It is suggested to define the structural or functional relationship between the two.

12. In regards to claims 8 and 9, "aims to" is vague because it is unclear whether or not the control circuit controls the strength of the signal; "a power amplifying circuit and a voltage booster" is unclear whether this is the same element or two redundant elements because a "voltage booster" is a "power amplifying circuit"; and "the filter" is

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lacking a relationship to the other elements because the transformer rectifies the “current from the filter”, but nowhere has it been set forth that the filter receives current, generates current, or stores current.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 102(e) as anticipated by Courtnage et al. (US 2002/0143373, hereinafter “Courtnage”) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Courtnage in view of Fukuoka (US 4,033,054, hereinafter “Fukuoka”).

16. In regards to claim 1, Courtnage discloses a device comprising a fixing element (106), electrical plates (116), a thermal device (118), and a control circuitry that generates a low frequency signal to the plates and activates the thermal device (214). Although Courtnage does not explicitly indicate that the device is an insole, the device is cast in the shape of a foot (par. 0032) and moldable, therefore inherently enabling it to serve as an insole. Alternatively, Fukuoka teaches of providing an insole to stimulate vital areas of the foot (abstract) to allow the patient to comfortably wear the therapy device. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Courtnage's invention in the form of an insole to allow the patient to comfortably wear the therapy device.

17. In regards to claim 2, Courtnage discloses that both the electrical plates (116) and the thermal device (118) are received in an insole (100) and a pad (112).

18. In regards to claims 5 and 6, the fixing element is made of an elastic cloth (par. 0033).

19. Claims 3, 4, and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courtnage in view of Fukuoka.

20. In regards to claims 3, 4, 7 and 9, Courtnage discloses the essential features of the claimed invention except for magnetic units. Fukuoka teaches of providing an insole with magnetic units to provide magnetic stimulation to the effective spots (i.e. vital points) of the foot to improve the health and prevent disease. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Courtnage's invention by providing an insole with magnetic units to provide

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magnetic stimulation to the effective spots of the foot to improve the health and prevent disease.

21. In regards to claim 8, Courtnage discloses a control circuit comprising a "low frequency" signal-generating unit (214), magnitude control circuit (212), a power amplifying and boosting circuit (220), temperature control circuit (218), and a power source (210). It is well known in the art to provide external power sources with transformers and filters to allow the noisy AC power to be used by sensitive DC devices, such as microcontrollers. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Courtnage's invention by providing a transformer and filter to allow noisy external AC power to be used by the sensitive DC devices, such as the microcontroller (214). Further, Courtnage discloses the claimed invention but does not disclose expressly the mediate frequency oscillator. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the signal-generating unit as taught by Courtnage with the mediate frequency oscillator because applicant has not disclosed that a mediate frequency oscillator provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the signal-generating unit as taught by Courtnage because both output a low-frequency signal having the desired parameters (par. 0043). Therefore, it would have been an obvious matter of design choice to modify the signal-generating unit to obtain the invention as specified in the claims.

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22. In regards to claims 10-14, although Courtnage discloses that the multiple electrodes (116) can be "selectively" activated and the amount, waveform, and frequency of the plates are able to be altered, Courtnage does not expressly disclose the claimed electrode configurations. It is well known in the art to use various combinations of anodes and cathodes, such as the claimed configurations, to target a specific area of the body with a specific polarity of stimulation to treat a particular malady in a customizable way. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Courtnage's invention with the claimed configurations of anodes and cathodes to treat a particular malady in a customizable way.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fellus (US 4,454,883) is one of many teachings of electro-therapeutic devices having transformers and filters and Tukamoto (US 4,508,119) is one of many teachings of providing a electro-therapeutic device with either anodal or cathodal electrodes.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kahelin whose telephone number is (571) 272-8688. The examiner can normally be reached on M-F, 9-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MWK*


6/4/06


GEORGE R. EVANISKO
PRIMARY EXAMINER

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